

SOUTH ATLANTIC STANDARD HOPPER DREDGE REGULATORY PERMIT CONDITIONS

00. Reporting: The Permittee shall ensure all reports, notifications, documentation and correspondence required by the general or special conditions of this Department of the Army (DA) permit are submitted to the Corps at the following email address: sajdredgenotice@usace.army.mil. Requests for documents, forms or information should also be submitted to the Corps at this email address. The Permittee shall reference this DA permit number, SAJ- - - , 'SARBO', and include the topic in the subject line of the email and on all submittals.

00. Deflector Device Submittal: No dredging shall be performed by a hopper dredge without the inclusion of an approved rigid sea turtle deflector device. The Permittee shall ensure that drawings of the proposed sea turtle deflector device and the Hopper Dredge Deflector Device Checklist form (Attachment__) are complete and all required documentation submitted to the Corps, at least 30 days prior to initiating the authorized work. The Permittee shall not commence hopper dredging until approval of the sea turtle deflector device has been granted by the Corps. A copy of the approved drawings, calculations and signed Hopper Dredge Deflector Device Checklist form shall be available on the vessel during dredging operations.

00. Pre-Dredging Inspection Submittal: The Permittee shall submit the completed Hopper Dredge Pre-Dredge Inspection Checklist form (Attachment__) to the Corps, at least 5 days prior to initiating the authorized work.

00. Dredging Quality Management: Dredging and dredged material disposal and monitoring of dredging projects using the Dredging Quality Management (DQM) system shall be implemented for this DA permit. The Permittee shall ensure that each hopper dredge assigned to the work authorized by this DA permit is equipped with DQM, previously known as 'Silent Inspector', for hopper dredge monitoring. The Permittee's DQM system must have been certified by the DQM Support Team within one calendar year prior to the initiation of the dredging/disposal. Questions regarding certification should be addressed to the DQM Support Center at 251-690-3011. Additional information about the DQM System can be found at <http://dqm.usace.army.mil>. The Permittee is responsible for insuring that the DQM system is operational throughout the dredging and disposal project and that project data are submitted to the DQM National Support Center in accordance with the specifications provided at the aforementioned

website. The data collected by the DQM system shall, upon request, be made available to the Regulatory Division of the U.S. Army Corps of Engineers - Jacksonville District.

00. Commencement Notification: Within 3 days from the date of initiating the authorized work, the Permittee shall provide to the Corps, the completed Hopper Dredge Startup Inspection Checklist form (Attachment __) with a written notification of the date of commencement of work authorized by this DA permit. An inspection of the hopper dredge will be scheduled and performed by the Corps after receipt of the notification of commencement.

00. Regional Biological Opinion: Hopper dredging is approved under the current National Marine Fisheries Service (NMFS) South Atlantic Regional Biological Opinion (SARBO) and its references which can be viewed on the following web site: <http://el.erdc.usace.army.mil/seaturtles/refs-bo.cfm>. The permittee is responsible for obtaining and complying with the SARBO. If the permittee is unable to view the SARBO at this website the permittee shall contact the Corps to receive a copy of the SARBO. The permittee shall implement all reasonable and prudent measures identified in the SARBO. NMFS has issued the SARBO to the Corps of Engineers for hopper dredge projects that limit the take of listed turtles, whales, sturgeon, sawfish, and any other species listed in the SARBO. Authorization under this DA permit is conditional upon compliance with all of the mandatory terms and conditions associated with the SARBO, which terms and conditions are incorporated by reference in this DA permit. Failure to comply with the terms and conditions associated with the SARBO, where a take of the listed species occurs, would constitute non-compliance with this DA permit. Failure to comply with this DA permit will be the basis for suspension and revocation of this DA permit and may be the basis for other enforcement action. NMFS has directed that this SARBO issued to the Corps serve as the formal consultation for all hopper dredge projects in the area covered by the SARBO, however, where the terms and conditions of the SARBO differ from the Special Conditions of this DA permit, the Special Conditions of this DA permit will take precedence as the more stringent condition.

00. Incidental Take Statement: This DA permit does not authorize the Permittee to take an endangered species, in particular sea turtles, sturgeon, whales or any other endangered species listed in the SARBO. The SARBO includes an Incidental Take Statement (ITS) issued to the Corps. The Permittee understands and agrees that, even where it is in full compliance with the terms and conditions of the SARBO ITS and this DA permit, incidental take by the Permittee or other hopper dredging operations within the area covered by the SARBO may result in suspension or modification of this DA permit by the Corps. The amount of incidental take that will trigger suspension, and the need for any such suspension, shall be determined at the discretion of the Corps. The Permittee understands and agrees on behalf of itself, its agents, contractors, and other

representatives, that no claim, legal action in equity or for damages, adjustment, or other entitlement against the Corps shall arise as a result of such suspension or related action.

00. Endangered Species Observers: During dredging operations, NMFS approved endangered species observers (Observer) shall be aboard each hopper dredge to monitor for the presence of endangered species including sea turtles, sturgeon, whales and manatees. Observers shall perform their observations 24hr/day and every day during dredging operation.

a. During transit to and from the disposal area, the Observer shall monitor from the bridge during daylight hours for the presence of endangered species, especially the Northern right whale, during the period December through March.

b. During dredging operations, while dragheads are submerged, the Observer shall continuously monitor the inflow and/or overflow screening for turtles and/or turtle parts and sturgeon and/or sturgeon parts.

c. Upon completion of each load cycle, dragheads should be monitored as the draghead is lifted from the sea surface and is placed on the saddle in order to assure that sea turtles that may be impinged within the draghead are counted and recorded. The Observer shall physically inspect dragheads and inflow and overflow screening/boxes for threatened and endangered species take. The Observer shall identify, count and record sea turtle or sturgeon parts during the inspection of the inflow and overflow screening/boxes. All debris shall be removed from the screening/boxes after the inspection is complete so as not to impede the functioning of the screens during the next load cycle.

d. The Observer shall maintain a log detailing all incidents, including sightings, collisions with, injuries to, or killing of endangered species during dredging operations. The data shall be recorded daily on the Observer forms which are located at the following web site under the heading "Turtle Information":

<http://el.erdc.usace.army.mil/seaturtles>. If the permittee is unable to view the Observer forms at this website the permittee shall contact the Corps to receive a copy of the Observer forms. Completed observer forms shall be submitted to the Corps at the end of each day as identified in the reporting special condition. A Summary Report of the above incidents and sightings shall be submitted to the Corps within 15 days of project completion.

00. Observer Equipment: The Permittee shall provide a digital camera, with an image resolution capability of at least 300 dpi, in order to photographically report all incidental takes, without regard to species, during dredging operations. Immediately following the incidental take of any threatened or endangered species, images shall be submitted to the Corps in a .JPG or .TIF format and shall accompany incidental take forms. The

nature of findings shall be fully described in the incidental take forms including references to photographs.

00. Incidental Take: The Permittee shall immediately cease all hopper dredging operations and notify the Corps upon discovery of an incidental take of a sea turtle or sturgeon. The Permittee shall not resume hopper dredging until notified by the District Engineer, or his designee. The Sea Turtle Incidental Take Data form which is located at the following web site under the heading "Turtle Information" Observer Forms: <http://el.erdc.usace.army.mil/seaturtles> will be filled out by the Observer and shall be submitted to the Corps with photographic documentation within 6 hours of the take event.

00. Sea Turtle Trawling: Sea turtle trawling shall be conducted following the take of two sea turtles, without regard to species, and continue until the end of dredging or as directed by the Corps. Trawling shall be conducted in accordance with the Sea Turtle Trawling requirements (Attachment). Hopper dredging shall not resume until trawling has been initiated and until notified by the District Engineer, or his designee. The results of each trawl shall be recorded on the Sea Turtle Trawling Report which are located at the following web site under the heading "Turtle Information": <http://el.erdc.usace.army.mil/seaturtles>. If you are unable to view the Trawling Report forms at this website you must contact the Corps to receive a copy of the forms. Interim trawling reports shall be submitted to the Corps by the end of each day. A final trawling report shall be prepared and submitted to the Corps after the completion of all trawling efforts. The final trawling report shall summarize the results of the trawling including total trawling times, number of trawls and number of captures. Any turtles captured during trawling shall be immediately released.

Best Management Practice Design Criteria for Hopper Dredge/Sea Turtle Friendly Borrow Sites

The following borrow site design criteria should be considered as a Best Management Practice when designing an offshore borrow site that is CORAL REEF, SEA TURTLE & HOPPER DREDGE FRIENDLY:

NOTE:

When the borrow site is more than 3 to 4 miles from the beach placement area a hopper dredge will most likely be the most economical way to perform the shore protection project.

1. The borrow site should be in 35 to 60 feet of water. When the borrow site is too shallow the dredge will run a ground before it is full of sand. This causes the dredge to have to light load which reduces the dredge's productivity.

2. The borrow site should be 2 miles square with flat sides to minimize the number of turns the dredge has to make to get a load of sand. Turns are not productive; they take time that the dredge is not digging.

a. Large and wide borrow sites allow the dredge to dredge in any direction which minimize trenches made by the draghead. Trenches cause the draghead to track away or under the dredge causing the drag tender to have to raise the draghead off the bottom and reset it next to the dredge. The more times the draghead is raised and lowered the greater the odds of taking a turtle and the less productive the dredging.

b. Large and wide borrow sites allows the dredge to dredge in any direction, reducing crabbing. Crabbing is when the dredge has to steer across a current or the wind causing the dredge to move sideways. Crabbing requires the drag tender to have to raise the dragheads off the bottom more often because the dragheads want to tack under or away from the dredge. Large and wide borrow sites reduce crabbing by allowing the dredge to dredge into the constantly changing currents or wind.

c. Dredging becomes less efficient when the dredge has to turn or raise the draghead off the bottom. The less efficient the dredging, the more time the project takes and the more stress on the coral, sea turtles and other natural resources in the area. The maximum production is obtained when a hopper dredge shortens its cycle time (time the dredge takes to dig a full load, sail to the beach and pump the sand out and return to the dredge site).

3. Borrow sites should have more sand than needed to complete the project. A hopper dredge does not dig corners well so sand in the corners of the borrow site can not be dug efficiently with a hopper dredge. Hopper dredges like to dredge flat, thin, long layers of sand.

a. Stepping the bottom of a borrow site may cause the hopper dredge to have to raise and lower the draghead. This reduces productivity and sand in the corners and sides of each step can not be dug efficiently with a hopper dredge.

4. The dredging cost is a large cost of a project so spending more money in the location and design of a borrow site is paid back in reduced dredging cost. Costly dredging delays due to sea turtle takes or coral impacts can be reduced by proper borrow site location and design.

5. There are many limitations to borrow site location and design but the above criteria should be part of the Best Management Practice to protect coral and sea turtles by maximizing dredging production and reducing project cost.

HOPPER DREDGE PRE-DREDGE INSPECTION CHECKLIST

Dept. of the Army Permit No.: SAJ- _____ - _____

Project Name:

Project Location:

Dredging Company Name (Contractor):

Vessel Name:

Inspector's Name and Title:

Date of Inspection:

Dredging contractor pre-dredge inspection requirements:

1. _____ Has the dredging contractor read the Department of the Army Permit to determine the permit requirements for the protection of endangered sea turtles?
2. _____ Is a copy of the Department of the Army permit on board the vessel?
3. _____ Has the dredging contractor reviewed the applicable Biological Opinion located at:
<http://el.erdc.usace.army.mil/seaturtles/refs-bo.cfm>
4. _____ Has the Turtle Deflector Device been approved by the Corps? (Dredging shall not start until the Turtle Deflector Device is approved and the Initial Hopper Dredge Submittal form has been signed by the Corps).
5. _____ Is a copy of the approved Turtle Deflector Device submittal on board the vessel?
6. _____ Is the approved Turtle Deflector Device submittal being used to perform this pre-dredge inspection?
7. _____ Is the Turtle Deflector Device that is on the dredge the same as the approved submitted Turtle Deflector Device?
8. _____ Is the Turtle Deflector Device structurally sound?

- [illegible]

I certify that the above components are properly installed and operational in accordance with the SARBO and the DA permit for the referenced project.

(Dredging Contractor Signature)

(Date)

HOPPER DREDGE STARTUP INSPECTION CHECKLIST

Dept. of the Army Permit No.: SAJ- _____ - _____

Project Name:

Project Location:

Dredging Company Name (Contractor):

Vessel Name:

Inspector's Name and Title:

Date of Inspection:

Dredging contractor startup dredge inspection requirements:

1. _____ Is the Turtle Deflector Device submittal approved?
2. _____ Is the approved Turtle Deflector Device submittal being used to perform this startup-dredge inspection?
3. _____ Are the turtle observers onboard the vessel during dredging operations?
4. _____ Is dredging data recording system (DQM/Silent Inspector) turned on and recording draghead elevation, slurry density & velocity and is data being submitted?
5. _____ Was a paint test performed to assure the deflector is plowing at least 6" into the dredge material while the dragtender is consistently maintaining the submitted and approved approach angle to a tolerance of + 0 to - 4 degrees.
DATE: _____, TIME: _____
6. _____ Is the drag tender operating the dredge pump in accordance with the Hopper Dredging Terms and Conditions as follows:
 - a. _____ Starting the dredge pump only when the draghead is firmly on the bottom by watching the slurry specific gravity & swell compensator.
 - b. _____ Reducing the slurry velocity to less than 5 feet per second by reducing the dredge pump RPM to idle speed before raising the draghead off the bottom. Raising the draghead

HOPPER DREDGE DEFLECTOR DEVICE CHECKLIST

Dept. of the Army Permit No.: SAJ-_____ - _____

Project Name:

Project Location:

Dredging Company Name (Contractor):

Vessel Name:

1. _____ Dredging contractor has received a copy of and read the Dept. of the Army Permit for this project.

2. _____ Permittee and dredging contractor has reviewed the applicable Biological Opinion located at:

<http://el.erdc.usace.army.mil/seaturtles/refs-bo.cfm>

3. _____ Dredging depth(s) for the project:
Starting Depth(s):

Final Depth(s):

4. _____ Turtle Deflector Device submittal. Attach a detailed drawing showing structural design and soundness (see attached example drawing) of the Sea Turtle Deflector Device. The drawing shall include the following information:

a. _____ Deflector leading edge angle (90 degrees or less).

b. _____ Forward vertical face measurement of the deflector (minimum height of 15").

c. _____ The approach angle(s) for this project dredging depths.

d. _____ The opening between deflector and draghead (maximum of 4"x4").

- e. _____ The aft rigid deflector attachment to the draghead
(hinged or trunnion).
- f. _____ The forward deflector attachment link length
described for the project dredging depths and project
approach angles.

COMMENTS: _____

(Permittee Signature)

(Date)

(Name and Title - Printed)

(Dredging Contractor Signature)

(Date)

(Name and Title - Printed)

Hopper dredging shall not commence until this submittal is
approved and signed by the Corps:

(District Engineer)

(Date)